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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/736,401

12/15/2003

Seishi Ohmori

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EXAMINER

NEGRON, WANDA M

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

07/25/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/736,401

Applicant(s)

OHMORI, SEISHI

Examiner

Wanda M. Negrón

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claim 15-19 are rejected under 35 U.S.C. 102(e) as being anticipated by**

Yoshida (US Patent No. 6,961,087 B1).

3. Regarding **claim 15**, Yoshida discloses a method of managing storage space in a digital camera comprising receiving a signal from a user to take a photograph (see S805 in fig. 8), checking the remaining storage capacity of a memory card (19) to determine if there is sufficient space to record an image file corresponding to the photograph if the remaining storage capacity is insufficient (see S806 in fig. 8; see col.10, lines 42-46), receiving input from a user as to the number of new photographs the user wants to take, automatically determining the existing images files to be recompressed and the recompression ratios for each existing image file to be recompressed in order to free up enough space on the memory card to accommodate the number of new photographs selected by the user (see col. 10, lines 56–67; see col. 11, lines 30-38), recompressing the existing image files (see fig. 10), and storing the recompressed image files on the memory card (see fig. 10). It would have been

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inherent to restore the existing image files to be recompressed before performing the recompression procedure.

4. Regarding **claim 16**, Yoshida discloses that the recompression uses the JPEG standard (see col. 11, lines 30-38).
5. Regarding **claims 17 and 18**, Yoshida discloses that the digital camera includes a LCD display unit (106).
6. Regarding **claim 19**, Yoshida discloses that the digital camera includes a recompression button, i.e. a shutter button switch, which, when pressed to a half position, calls the memory reserve subroutine (see col. 10, lines 27-34).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 
8. ¹⁴Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamagata (US Patent No. 5,764,800), and further in view of Yoshida (US Patent No. 6,961,087 B1).

9. Regarding **claim 1**, Yamagata discloses a method of managing storage space in a digital camera, the method comprising (a) allowing a user to set a number of image files to be added to a recording medium of the digital camera, i.e. completely depressing the release button while in a compression mode, after the number of image files

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recordable, if recompression is performed, has been displayed (see step 110 and col. 5, lines 46-60); (b) determining which existing image files should be recompressed (step 111) and the rate at which recompression should occur so as to create sufficient storage space in the recording medium to store the number of additional files set by the user (step 112); (c) restoring the image files selected to be recompressed (see col. 4, lines 4-16); (d) recompressing the restored image files at the determined recompression rate (step 112); and (e) storing the recompressed image files in the recording medium (step 115). Yamagata, however, fails to disclose *automatically* determining which existing image files should be recompressed and the recompression rate.

Yoshida, on the other hand, discloses automatically determining if an image memory recompression routine is needed when a photographing mode is changed or when the user takes a picture (see fig. 8; col.10, lines 41-51).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to automate the invention disclosed by Yamagata using the process taught by Yoshida because it maximizes memory usage while minimizing user interaction.

10. Regarding **claim 2**, Yamagata, as modified by Yoshida, teaches the steps of, (f) determining whether an image file exists that is not already recompressed (step 105); and (g) if an image file exists that has not been recompressed, displaying a menu indicating the number of files to be added to the recording medium of the digital camera (step 109 and col. 5, lines 34-41).

However, Yamagata does not explicitly disclose the steps of, (h) displaying a message indicating that all existing image files have been recompressed and asking the user for permission to further recompress existing image files, if all existing image files have been recompressed; (i) determining whether user has granted permission to further recompress existing image files; (j) if the user denies permission, terminating the method, and (k) if the user grants permission, displaying a menu indicating the number of files to be added to the recording medium.

Steps (h), (i), (j), and (k) are associated with authorization to perform a higher recompression ratio on previously recompressed image data. Official notice is taken that the use of higher recompression ratios decreases the image quality. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to ask the user for authorization for further recompression of previously recompressed data because it would prevent further degradation of significant images.

11. Regarding **claim 3**, Yamagata, as modified by Yoshida, discloses the step of, (l) determining if a recompression function has been selected (step 101).

12. Regarding **claim 4**, Yamagata, as modified by Yoshida, discloses that step (l) comprises determining whether a recompression button has been pressed, i.e. the user actuates mode selection button 14 to select a compression mode (see col. 4, lines 50-55).

13. Regarding **claim 5**, Yamagata, as modified by Yoshida, discloses that the recording medium (M) is removable from the digital camera (see figure 1).

14. Regarding **claim 6**, Yamagata, as modified by Yoshida, discloses that the recording medium (M) is a memory card (see col. 2, lines 61-63).

15. Regarding **claims 7 and 8**, Yamagata, as modified by Yoshida, does not explicitly teach that the recording medium (M), i.e. an IC memory card, is a compact flash card or a memory stick. Official notice is taken that CompactFlash and Memory Stick are well-known standards for IC memory cards. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use CompactFlash and Memory Stick standards as the IC memory card taught by Yamagata since doing so would make the recording medium directly compatible with other peripherals, e.g. printers, other digital cameras, etc.

16. Regarding **claim 9**, Yamagata, as modified by Yoshida, discloses that the recompression, i.e. a higher compression mode, utilizes the JPEG standard (see col. 4, lines 1-3).

17. Regarding **claim 10**, Yamagata, as modified by Yoshida, discloses that the digital camera includes a display unit (13).

18. Regarding **claim 11**, Yamagata, as modified by Yoshida, does not explicitly disclose that the display unit (13) is an LCD screen. Official notice is taken that the use of an LCD as a camera display is well known in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used an LCD device as a display unit in the invention of Yamagata since an LCD requires less amount of electric power to operate, thus, saving the battery power of the camera.

19. Regarding **claim 12**, Yamagata, as modified by Yoshida, discloses that steps f, g, h, i, j, and k are performed before steps a, b, c, d, and e (see figures 4A and 4B).

20. Regarding **claim 13**, Yamagata, as modified by Yoshida, discloses that step (l) is performed first, and steps f, g, h, i, j, and k are performed before steps a, b, c, d, and e (see figures 4A and 4B).

21. Regarding **claim 14**, Yamagata, as modified by Yoshida, does not explicitly disclose that images with lower compression ratios are selected for recompression before images with higher compression ratios.

Official notice is taken that it is well known in the art that using higher compression ratios decreases the image quality. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select images with lower compression ratios for recompression before images with higher compression ratios in order to minimize image deterioration due to higher compression.

22. **Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (US Patent No. 6,961,087 B1).**

23. Regarding **claim 20**, as mentioned in the discussion of claim 15 *supra*, Yoshida discloses all the limitations of the parent claim. Yoshida, however, does not explicitly disclose that images with lower compression ratios are selected for recompression before images with higher compression ratios.

Official notice is taken that it is well known in the art that using higher compression ratios decreases the image quality. Therefore, it would have been obvious

to one having ordinary skill in the art at the time the invention was made to select images with lower compression ratios for recompression before images with higher compression ratios in order to minimize image deterioration due to higher compression.

Response to Arguments

24. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Yamagata (US Patent No. 6,263,106 B1) discloses an image data compression device with a memory recovery function using recompression.
- Boyd (US Application Publication No. 2004/0027461 A1) discloses a digital camera with a recompression feature with an image deletion selection.
- Rabbani et al. (US Patent No. 6,885,395 B1) disclose a digital image device that selectively adjusts the quality level of recorded images for memory recovery purposes.

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

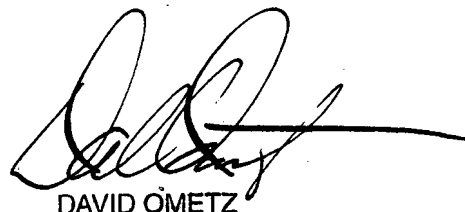
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wanda M. Negrón whose telephone number is (571) 270-1129. The examiner can normally be reached on Mon-Fri 6:30 am - 4:00 pm alternate Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wanda M. Negrón/
Examiner, Art Unit 2622
July 12, 2007

A handwritten signature in black ink, appearing to read 'David Ometz', with a long horizontal stroke extending to the right.

DAVID OMETZ
SUPERVISORY PATENT EXAMINER